



**RECEIVED**  
OCT 17 2003  
Technology Center 2000

**LISTING OF CLAIMS:**

This listing of claims, including newly added claims 8-16, will replace all prior versions, and listings, of claims in the application:

**Claim 1 (Currently Amended):**

An optical transmitter module which

has an optical semiconductor element, an optical fiber optically coupled to said optical semiconductor element, an inline optical isolator provided for said optical fiber, and a package case containing said optical semiconductor element and said optical fiber, comprising:

a substrate member with one end of said optical fiber on the light incident side fixed thereon to be optically coupled to said optical semiconductor element;

a thermoelectric cooler with said substrate member joined to a top surface thereof; and

a pipe-like support member projecting from the side face of said package case for fixing said optical isolator,

wherein said optical isolator is joined on its whole perimeter to said pipe-like support member at a distal end thereof so as to be fixed to said pipe-like support member.

**Claim 2 (Original):**

The optical transmitter module

according to claim 1, wherein the end of said optical fiber on the light incident side is spherical or conical in shape.

**Claim 3 (Currently Amended):** The optical transmitter module according to claim 1, wherein the length of said optical fiber from said optical isolator to the point ~~in at~~ which itsaid optical fiber is fixed to optically couple to said optical semiconductor element is 15 to 25 mm.

**Claim 4 (Currently Amended):** The optical transmitter module according to claim 1, wherein said optical isolator ~~and is fixed to~~ said pipe-like support member ~~are fixed to each other~~ through laser welding or brazing.

*Al conf*  
**Claim 5 (Currently Amended):** An optical transmitter module which has an optical semiconductor element, an optical fiber optically coupled to said optical semiconductor element, an inline optical isolator provided for said optical fiber, a substrate member with one end of said optical fiber fixed thereon to optically couple to said optical semiconductor element, a thermoelectric cooler with said substrate member joined to the top surface thereof, and a package case containing said optical semiconductor element and said optical fiber,

wherein one end of said optical fiber is bonded to the top surface of said substrate member, and then said optical isolator is welded on its whole perimeter to a pipe-like support member at a distal end thereof, which support member is provided on the side face of said package case.

**Claim 6 (Currently Amended):** An optical transmitter module which has an optical semiconductor element, an optical fiber, an optical isolator provided for said optical fiber, a substrate member with one end of said optical fiber fixed

thereon to optically couple to said optical semiconductor element, a thermoelectric cooler controlling the temperature of said optical semiconductor element, and a package case,

wherein said substrate member and said optical semiconductor element are provided on the top surface of said thermoelectric cooler, and said optical isolator is fixed on its whole perimeter to a pipe-like support member at a distal end thereof, which support member is projected from ~~provided on the side face of said package case.~~

**Claim 7 (Original):** The optical transmitter module according to claim 6, wherein a signal light passing through said optical isolator is a substantially collimated light or a substantially converged light.

al  
com'f

**Claim 8 (Newly Added):** The optical transmitter module according to claim 1, wherein said optical fiber positioned between said optical isolator and said pipe-like support member is arranged in a bent state.

**Claim 9 (Newly Added):** The optical transmitter module according to claim 5, wherein said optical fiber positioned between said optical isolator and said pipe-like support member is arranged in a bent state.

**Claim 10 (Newly Added):** The optical transmitter module according to claim 6, wherein said optical fiber positioned between said optical isolator and said pipe-like support member is arranged in a bent state.

**Claim 11 (Newly Added):** The optical transmitter module according to claim 1, wherein a signal light passing through said optical isolator is a substantially collimated light or a substantially converged light.

**Claim 12 (Newly Added):** The optical transmitter module according to claim 5, wherein a signal light passing through said optical isolator is a substantially collimated light or a substantially converged light.

*all  
cont*

**Claim 13 (Newly Added):** An optical transmitter module, comprising:

- a thermoelectric cooler positioned inside a package case;
- a substrate mounted on the thermoelectric cooler inside the package case;
- an optical semiconductor element disposed on the substrate to generate a light beam;
- an optical fiber disposed on the substrate, and optically coupled to the optical semiconductor element to transport the light beam, via a side face of the package case;
- an optical isolator disposed outside of the package case, and aligned with the optical fiber, via the side face of the package case, to provide a substantially collimated light beam or a substantially converged light beam;
- a pipe-like support member projecting from the side face of the package case to fix the optical isolator,

wherein the optical isolator is joined on its whole perimeter to the pipe-like support member at a distal end thereof so as to be fixed to the pipe-like support member.

**Claim 14 (Newly Added):** The optical transmitter module according to claim 13, wherein the end of the optical fiber on a light incident side is spherical or cuneal in shape.

*Al  
concl.*

**Claim 15 (Newly Added):** The optical transmitter module according to claim 13, wherein the length of the optical fiber from the optical isolator to the point at which the optical fiber is fixed to optically couple to the optical semiconductor element is 15 to 25 mm.

**Claim 16 (Newly Added):** The optical transmitter module according to claim 13, wherein the optical fiber positioned between the optical isolator and the pipe-like support member is arranged in a bent state.

---